

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Atty. Docket

FABIO VIGNOLI

NL 021053

Confirmation No. 1612

Serial No. 10/532,469

Group Art Unit: 2626

Filed: APRIL 22, 2005

Examiner: SAINT CYR, L.

Title: CONTROLLING AN APPARATUS BASED ON SPEECH

Mail Stop Appeal Brief-Patents  
Board of Patent Appeals and Interferences  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

CORRECTED APPEAL BRIEF

Sir:

Appellants herewith respectfully presents a SUMMARY OF THE CLAIMED SUBJECT MATTER responsive to the Notice of Non-Compliant Appeal Brief mailed on July 17, 2009 as follows:

Please delete the previously submitted SUMMARY OF THE CLAIMED SUBJECT MATTER section, and substitute the following SUMMARY OF THE CLAIMED SUBJECT MATTER section included herein.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention, for example, as recited in independent claim 1 and shown in FIGs 1-2, as well as described on page 6, lines 1-6 of the specification, is directed to a speech control unit 100 for controlling an apparatus 200 on basis of speech, comprising a microphone array, comprising multiple microphones 102, 104, 106, 108, 110 for receiving respective audio signals 103, 105, 107, 109, 111.

As shown in FIG 1, and described on page 6, lines 7-9 and page 7, lines 8-18, the speech control unit 100 includes a beam forming module 116 for extracting a speech signal 117 of a user U1, from the audio signals 103, 105, 107, 109, 111 as received by the microphones 102, 104, 106, 108, 110, by enhancing first components of the audio signals which represent an utterance originating from a first position P1 of the user U1 relative to the microphone array.

As shown in FIG 1, and described on page 6, lines 13-14 and page 7, lines 8-18, a speech recognition unit 118 creates an

instruction for the apparatus 200 based on recognized speech items of the speech signal. Further, as shown in FIG 1, and described on page 6, lines 10-12 and page 7, lines 8-18, a keyword recognition system 120 recognizes a predetermined keyword that is spoken by the user U1 and which is represented by a particular audio signal.

As described on page 3, lines 22-29, and page 6, line 10 to page 7, line 3 of the specification, the speech control unit 100 is arranged to control the beam forming module 116, on basis of the recognition of the predetermined keyword, in order to enhance second components of the audio signals which represent a subsequent utterance originating from a second position P2 of the user U1 relative to the microphone array.

Further, as described on page 4, lines 4-15 of the specification, the recognition of the predetermined keyword at the second position calibrates the beam forming module 116 to follow the user from the first position P1 to the second position P2 so that the subsequent utterance originating from the second position P2 are accepted while utterances of other users U2 at other positions are discarded. The second position P2 includes

orientation and distance relative to the microphone array, as described on page 4, lines 22-25.

In addition, as described on page 4, lines 25-28, the speech control unit 100 is also configured to discriminate between sounds originating from users who are located in front of each other. The subsequent utterance originating from the second position P2 will be discarded if not preceded by the recognition of the predetermined keyword originating from the second position P2, as described on page 3, line 29 to page 4, line 3.

The present invention, for example, as recited in independent claim 9 and shown in FIGs 1-2, as well as described on page 6, lines 1-6 of the specification, is directed to a method of controlling an apparatus 200 on basis of speech, comprising receiving respective audio signals 103, 105, 107, 109, 111 by a microphone array, comprising multiple microphones 102, 104, 106, 108, 110.

As shown in FIG 1, and described on page 6, lines 7-14 and page 7, lines 8-18, the method further includes extracting a speech

signal 117 of a user U1, from the audio signals 103, 105, 107, 109, 111 as received by the microphones 102, 104, 106, 108, 110, by enhancing first components of the audio signals which represent an utterance originating from a first position P1 of the user relative to the microphone array.

Further, as shown in FIG 1, and described on page 6, lines 10-12 and page 7, lines 8-18 the method include recognizing a predetermined keyword that is spoken by the user U1 based on a particular audio signal.

In addition, as described on page 3, lines 22-29, page 6, line 10 to page 7, line 3, and page 4, lines 4-15 of the specification, the extraction of the speech signal of the user U1 is controlled on basis of the recognition of the predetermined keyword, in order to enhance second components of the audio signals which represent a subsequent utterance originating from a second position P2 of the user U1 relative to the microphone array, while discarding utterances of other users at other positions.

Further, as described on page 4, lines 22-28 of the specification, the second position P2 includes an orientation and a

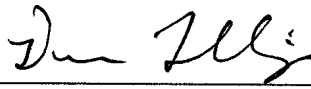
distance relative to the microphone array so that sounds originating from users who are located in front of each other are discriminated.

As described on page 3, line 29 to page 4, line 3, an instruction for the apparatus is created based on recognized speech items of the speech signal, and the subsequent utterance originating from the second position P2 is discarded if not preceded by the recognition of the predetermined keyword originating from the second position P2.

In addition, Appellant denies any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Appellant reserves the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

In view of the above, it is respectfully submitted that the Brief on Appeal is compliant and consideration on the merits is respectfully requested.

Respectfully submitted,

By   
Dicran Halajian, Reg. 39,703  
Attorney for Appellant  
August 17, 2009

**THORNE & HALAJIAN, LLP**  
Applied Technology Center  
111 West Main Street  
Bay Shore, NY 11706  
Tel: (631) 665-5139  
Fax: (631) 665-5101